

In re Patent Application of
DELLMO ET AL.
Serial No. 10/806,937
Filed: MARCH 23, 2004

REMARKS

The Examiner is thanked for the thorough examination of the present application. The patentability of the claims is discussed below.

I. The Claimed Invention

The present invention, as recited in independent Claim 1, for example, is directed to a cryptographic device including a cryptographic module and a communications module coupled thereto. The cryptographic module includes a user network interface and a cryptographic processor coupled thereto, the communications module includes a network communications interface coupled to the cryptographic processor, the cryptographic processor communicating with said user network interface using a predetermined protocol, and the cryptographic processor communicating with the network communications interface using the predetermined protocol, the user network interface includes a plurality of different types of connectors for coupling the cryptographic module to different network devices.

Independent Claim 37 is directed to the cryptographic module of independent Claim 1. Independent Claim 21 is a method counterpart of independent Claim 1. Independent Claim 28 is a system counterpart of independent Claim 1.

Independent Claim 12 is directed to a corresponding cryptographic device where the cryptographic module includes a

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Local Area Network (LAN) interface, the communications module includes a network LAN interface, the cryptographic processor communicates using a Media Independent Interface (MII), and the cryptographic module and communications module both operate using at least one unique external media access control (MAC) address, and at least one fixed internal MAC address.

II. The Claims are Patentable

A. Independent Claims 1-11, and 21-42 Are Patentable

The Examiner rejected independent Claims 1, 21, 28, and 37 based on a combination of Dellmo et al. and Lee et al. Dellmo et al. is directed to a secure wireless LAN device including a housing, a wireless transceiver carried by the housing, and a cryptography circuit carried by the housing. A media access controller (MAC) is included and implements a predetermined wireless LAN MAC protocol. The cryptography circuit includes a cryptography processor, and a control gateway circuit connected to the MAC and the wireless transceiver. The secure wireless LAN device also includes a user network interface carried by the housing and connected to the MAC.

The Examiner correctly recognized that Dellmo et al. fails to disclose the user network interface comprising a plurality of different types of connectors for coupling the cryptographic module to different network devices. The Examiner turned to Lee et al. for these critical deficiencies. Lee et al. is directed to an open internet protocol services platform.

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More particularly, Lee et al. discloses a system that provides any or all functions of common network devices such as routers, firewalls, packet shapes, switches, and servers in a single unit. The system includes a switch router that provides port connections to external networks via gigabit Ethernet fiber (GBIC) ports, 10/100 Mbps Ethernet (BaseT) ports, PCMCIA expansion ports, and additional PCI expansion slots.

Applicants submit that the Examiner's proposed combination of references is improper. Indeed, a person of ordinary skill in the art would not turn to an internet protocol services platform of Lee et al. (i.e. a computer that performs networking functions) to supply the critical deficiencies of the modular cryptographic device of Dellmo et al. Indeed, nowhere does Lee et al. even mention cryptographic processing.

Moreover, while Lee et al. broadly mentions security in paragraphs 0017, 0048, and 0049, Lee discloses that the internet protocol services platform takes advantage of the security features of the operating system therein and includes the complete operating system. (See Lee et al., Paragraph 0048). Lee et al. is directed to a system that provides functions of wired network devices. As noted above, the Lee et al. system includes a switch router that provides port connections to external networks via gigabit Ethernet fiber (GBIC) ports, 10/100 Mbps Ethernet (BaseT) ports, PCMCIA expansion ports, and additional PCI expansion slots - all of which are wired. In stark contrast, Dellmo et al. discloses a

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secure wireless network device. A person having ordinary skill in the art would not combine the wired network connections of Lee et al. with the secure wireless network device of Dellmo et al. Combining the wired network connections of Lee et al. with the secure wireless device of Dellmo et al. would destroy the operability of the Dellmo et al. secure wireless device. Accordingly, the Examiner's combination of references is improper.

B. Claims 12-20 Are Patentable

The Examiner rejected independent Claim 12 over a four-way combination of Dellmo et al., Boucher et al., Nguyen, and Lee et al. The Examiner cited Dellmo et al. as teaching a cryptographic device comprising a cryptographic module and a communications module coupled thereto. The cryptographic module includes a user LAN interface and a cryptographic processor.

The Examiner correctly recognized that Dellmo et al. does not teach a cryptographic processor communicating with the user network interface using a Media Independent Interface (MII). The Examiner then turned to Boucher et al. for this noted deficiency. The Examiner contended Boucher et al. discloses the cryptographic processor communicating with the user network interface using an MII, and the cryptographic processor communicating with the network LAN interface using the MII. Boucher et al. is directed to a device for processing network communication to greatly increase the speed and

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efficiency of transferred data. Boucher et al. discloses an intelligent network interface card connected with four network lines that transport data along a number of different conduits, where each connection provides an MII.

The Examiner further correctly recognized that even a selective combination of Dellmo et al. and Boucher et al. fails to teach the cryptographic processor communicating with the network LAN interface using the MII and cryptographic module both operating using at least one unique external media access control (MAC) address, and at least one fixed internal address. The Examiner turned to Nguyen et al. for this deficiency. Nguyen et al. is directed to a method and apparatus for improving the configuration of virtual connections. Virtual path identifier and virtual channel identifier availability indexes are made available to network administrators in order to reduce the potential for misconfiguration.

The Examiner still further correctly recognized that even the three-way combination of Dellmo et al., Boucher et al. and Nguyen fails to disclose the user LAN interface including a plurality of different connectors for coupling the cryptographic module to different network devices. The Examiner then turned to Lee et al. for this critical deficiency.

Lee et al. is directed to an open internet protocol services platform. More particularly, Lee et al. discloses a system that provides any or all functions of common network devices such as routers, firewalls, packet shapes, switches, and

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servers in a single unit. The system includes a switch router that provides port connections to external networks via gigabit Ethernet fiber (GBIC) ports, 10/100 Mbps Ethernet (BaseT) ports, PCMCIA expansion ports, and additional PCI expansion slots.

Applicants respectfully submit that the Examiner's proposed combination of Dellmo et al., Bouchard et al., Nguyen et al., and Lee et al. is improper. Applicants point out that Dellmo et al., as noted above, and whose primary objective is to provide greater security in a wireless LAN environment, teaches a secure wireless LAN device including a housing, a wireless transceiver carried by the housing, and a cryptography circuit carried by the housing. Conversely, Bouchard et al. and Nguyen et al. disclose attempts at efficient network communication and "virtual connection configuration in a non-secure environment.

Still further, Lee et al., whose combination with Dellmo et al. is improper for the reasons stated above, is directed to a system that provides functions of wired network devices and includes a switch router that provides port connections to external networks via gigabit Ethernet fiber (GBIC) ports, 10/100 Mbps Ethernet (BaseT) ports, PCMCIA expansion ports, and additional PCI expansion slots - all of which are wired. A person having ordinary skill in the art would not further turn to the virtual connection configuration settings of both Bouchard et al. and Nguyen to supply the deficiencies of Dellmo et al. and Lee et al.

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Applicants submit that the Examiner is using impermissible hindsight reconstruction based on Applicants' specification in an attempt to produce the claimed invention by selectively assembling disjoint pieces of the prior art. Indeed, a person having ordinary skill in the art would be taught away from the combining the increased network efficiency and the improved virtual connection configuration of Bouchard et al. and Nguyen et al. with the secure wireless LAN device of Dellmo et al, and further with the system including wired network devices of Lee et al.

Accordingly, it is submitted that independent Claims 1, 12, 21, 28 and 37 are patentable over the prior art. Their respective dependent claims, which recite yet further distinguishing features, are also patentable over the prior art and require no further discussion herein.

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III. Conclusion

In view of the arguments presented above, it is submitted that all of the claims are patentable. Accordingly, a Notice of Allowance is respectfully requested in due course. If the Examiner determines any remaining informalities exist, he is encouraged to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,



DAVID S. CARUS
Reg. No. 59,291
Allen, Dyer, Doppelt, Milbrath
& Gilchrist, P.A.
255 S. Orange Avenue, Suite 1401
Post Office Box 3791
Orlando, Florida 32802
407-841-2330
407-841-2343 fax
Attorney for Applicants